care of Dr. Lorain. The patient was 35 years old, and in her eighth pregnancy. She suffered from puerperal uræmic eclampsia of an epileptiform character. The fatal result being undoubted, the patient was carefully watched, and every preparation made for the operation. The moment after she drew her last breath, the abdomen was opened, and an infant at full term extracted. The child was not cyanosed, but did not respire at first; but after tickling in the mouth and slapping with wet cloths, in a minute it began to respire, and regular respiration was soon established.

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53. *The Value of the Corpus Luteum as a Proof of Impregnation.*—Dr. WM. T. BENHAM records (*Edin. Med. Journ.*, August, 1873) the following highly interesting case. The subject was a female, æt. 29, who it was impossible could have had sexual connection with any one for at least several years before her death, was admitted into the Bristol Lunatic Asylum in December, 1864, suffering from epilepsy. She died on the 26th March, 1873. On examination the organs of generation externally "presented in a marked degree all the highly characteristic signs of virginity. On removing the uterus, ovaries, and Fallopian tubes, they were found to be in a state of intense congestion, the superficial veins standing prominently out, and being filled with dark-coloured blood. The left ovary was more congested than the right, and on its upper anterior surface, situated rather more internally than externally, was seen a bean-like prominence, surrounded by a plexus of bloodvessels all the more apparent from their congested condition; it was of a polished appearance, and of rather a bluish shade of colour. On examining this body it was noticed that its upper surface presented a small nipple-like projection, apparently formed by the distension of a small portion of the peritoneal covering of the ovary, and containing some soft distending material; some small bloodvessels could be observed ramifying round the base of it. At the centre of this prominence was a small irregular dark spot as if a small orifice had existed there, and had been closed up by a clot of blood. On making an incision through its long diameter, there was at once seen an oval-shaped cavity filled by a mass of partially decolourized fibrin, and entirely surrounded—except at the point corresponding to the nipple-like process—with a thick yellow substance of considerable firmness, pierced by a number of small bloodvessels which sprang from the vascular plexus surrounding it externally; and on using a magnifying-glass of low power, these minute vessels could be seen traversing its substance, and losing themselves on its inner edge, which was contiguous to the surface of the partially decolourized fibrinous clot filling up the cavity. On measuring this cavity it was found to be five-eighths of an inch in its long, and three-eighths of an inch in its short, diameter. The yellow substance surrounding it was found to be of the uniform thickness of one-eighth of an inch, the whole structure measuring seven-eighths of an inch in its long, and five-eighths of an inch in its short, diameter. On again examining this yellow substance, it was seen to be of a firm granular-like matter, with many minute oil-globules scattered over its surface; and in parts where the bloodvessels were the most numerous they gave it a pinkish-yellow appearance. It will be at once seen that we have here occurring in the virgin ovary a corpus luteum, possessing such decided characteristics as to make it *per se* quite indistinguishable from the so-called *true* corpus luteum of impregnation of the same period, asserted by many writers—Paterson, Lee, Montgomery, Bernard, Deschamps, Müller, Ramsbotham, and others—never to occur but in the ovary of an impregnated female, and consequently regarded by them as infallible proof of a recent pregnancy.

"Hoping almost against hope that the ovule, which had evidently been only very recently extruded, might still be found in the cavity of the uterus, a section was made through its anterior wall, and on laying it open, there was seen a small circular body, of a reddish-white colour, almost buried in the pulpy purplish-coloured decidual débris, which thickly covered the whole of the interior surface of the uterus. On carefully removing what I could of this decidual matter from its surface, and examining it with an inch lens, it appeared to be more of a pinky-white colour, and having a fine velvety surface, which, under a higher magnifying power, was seen to consist of multitudes of white filaments. It measured, with the decidual matter surrounding it, and which could not be entirely separated from it, one-twentieth of an inch in diameter, and was situated a little more than seven-twelfths of an inch above the os internum, and slightly to the right side of the median raphé of the uterus. As I have already said, under a higher power its surface was seen to be composed of very short white filaments, which gave it much the appearance, only on a smaller scale, of one of the earliest impregnated ova on record, discovered and described by Velpeau as measuring about five-twelfths of an inch in diameter, and the filaments of which were so far developed as to measure one-twelfth of an inch in length. This ovum he stated to be fourteen days old.

"On making a section through this ovule, with the object of examining it more minutely, I noticed that a very small quantity of albuminous fluid escaped from it, and it lost its globular form directly. A partially collapsed cavity of very minute size was seen to occupy its centre, and although I carefully examined the incised ovule and the fluid which had escaped from it, I could discern nothing more of importance."

This case proves "that an unimpregnated ovule can and has descended into the cavity of the uterus, and remained there for some days without being, as stated by some, immediately washed away with the menstrual fluid, or without, as stated by others, having undergone such rapid dissolution as to have immediately passed away; and, what has been denied by many, that an ovule is ever impregnated in the cavity of the uterus itself, is now made extremely probable. There can, I think, be no doubt that, had this girl had sexual connection, this ovule might certainly have become a fecundated ovum; unless, indeed, what has never yet been demonstrated is the case, that the menstrual fluid, through which the spermatozoa would have to pass to reach the ovule, possesses the power of destroying those bodies immediately on coming into contact with them. Before passing from this subject, let me state that I think this individual case goes a long way to make it probable that where an ovule is extruded it takes place at the commencement of menstruation more frequently than at any other time. This ovule had evidently been extruded for some time—that is, not less than two days; and that it had not been extruded immediately before death is evident from the fact of its having been found in the cavity of the uterus, embedded in the decidual débris. It must, therefore, have taken some time to have been conveyed there, considering the distance it had to travel; and, besides, the condition of the fibrinous clot filling the cavity it left makes it certain that it had been extruded at least two days previously. It appears, then, that in this case the ovum was extruded at the commencement of menstruation, and that it is usually so in other cases seems, I think, to be indicated by this, that at the time of, and for a day or two previously to, menstruation, a much greater supply of blood flows to the ovaries than at any other period; and the fact of the distended Graafian vesicle sharing in the increased vascularity of the whole structure at that particular time, makes it extremely probable that the extra pressure then put upon the captive ovule should be sufficient to cause it to burst its coverings and to become extruded, and should it not be sufficiently developed to do so at that period, in all probability it would not become extruded until the ovary should be again the subject of increased vascularity; and this seems to show the reason why a menstrual period often passes without the extrusion of an ovule at that particular time. It would appear, then, that the increased vascularity which takes place at the menstrual period goes a long way to explain the mechanism by which an ovule is extruded more frequently at that than at any other time; also there can be no doubt that the increased vascularity is of great importance in producing those changes in the Fallopian tubes and their fimbriated extremities, which result in those parts of the sexual apparatus taking on the turgid and erectile character necessary for the due performance of the function of grasping the extruded ovule and of conveying it to the cavity of the uterus. But where, in cases by no means uncommon, an ovule is extruded and becomes impregnated at an *inter-menstrual* period, I am bound to believe, from instances which have come under my own observation, that it is owing to the fact that, from some exciting cause more or less potent, the ovaries have taken on an increased vascularity of action resembling that incident to menstruation, and sufficient to extrude a well-developed ovum at an abnormal time."

Bischoff, Casper, and Kirkes believed that the so-called true corpora lutea may be produced independently of impregnation, and that they consequently cannot be received as proofs of pregnancy. That they are right in this conclusion this case materially helps to prove. The fact of a corpus luteum of menstruation having been found to so exactly imitate those of impregnation, if, indeed, this was only a *solitary* instance, must considerably weaken the theory still held by many, that a so-called true corpus luteum is a sure sign of impregnation. When we come to consider why impregnation should make such a vast difference in the appearance and structure of the corpus luteum resulting therefrom—as is said to be the case—it is by no means easy to see the reason why such should be so.

Dr. Benham believes "that the presence of a so-called true corpus luteum, of at all recent formation, in the ovary of a female, has not the slightest legal value whatever in determining the question as to whether impregnation has taken place or not. If that is proved, as I believe it is, by the facts I have brought forward, it should be of considerable importance in its medico-legal as well as in its anatomical and physiological bearings, for in one case at least recorded by Dr. Guy, the existence of a corpus luteum was held to *prove* that conception had taken place, when the uterus itself presented not the slightest signs of such having been the case."

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54. *Duration of Menstruation.*—Dr. COHNSTEIN gives the results obtained from careful inquiry of four hundred women, in whom the menopause had occurred several years previously. 1. The average duration of menstruation was thirty-one years. 2. The menopause occurred gradually in 76 per cent., suddenly in 24 per cent. 3. It occurred in those who had menstruated early (under 13 years) about three years later than in those in whom the catamenia appeared late (after the 17th year of age). 4. The regularity or irregularity of menstruation appears to have no influence on its duration. 5. More married women than unmarried obtain a menstruation period of 29–34 years. 6. Pluriparæ show the highest percentage of duration of menstruation for 29–32 years. If their last confinement take place between the ages of 38 and 42, the duration of activity of the uterus varies between twenty-four and thirty-three years; if it occur between the ages of 30 and 38, the duration of menstruation varies between twenty-five and twenty-eight years. Abortion hastens the appearance of the menopause. 7. Lactation increases the duration of menstruation. To sum up, the catamenial function is of longest duration in women who menstruate early, are married, have more than three children, nurse their children themselves, and cease child-bearing between the ages of 38 and 42.—*Brit. Med. Journ.*, May 31, 1873, from *Deutsche Klinik*, No. 3, 1873.

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55. *Dysmenorrhœa.*—Dr. GEO. H. KIDD, in his address to the Obstetric Section of the British Medical Association at its late meeting, calls attention to the occurrence of two forms of dysmenorrhœa, one arising from obstruction, the other caused by subacute ovaritis.

"That dysmenorrhœa, dependent on an obstruction to the exit of the menstrual fluid from the uterus," he remarks, "is of frequent occurrence, no physician of practical experience can doubt. Moreover, that, when it does occur, it can only be relieved by treatment directed to the uterus, and of such a nature as will remove the impediment, is a matter of every-day experience, and cannot be questioned; but, when we find it asserted that, without obstruction, there cannot be dysmenorrhœa, or that obstruction is the essential cause of the disease, and that it can only be cured by removing this obstruction, then we are bound to inquire whether clinical experience will confirm the statement, or prove that it is one founded on a too limited sphere of observation. I shall ask you, then, to allow me to trace, in rapid outlines, the clinical history of dysmenorrhœa, and to inquire into the varying nature of the symptoms we meet with. In the first place, I shall speak of cases in which the pain is, beyond a